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Plume-moth, *Pterophorus periscelidactylus* of Fitch. We were able to raise the moth from larvæ forwarded by Mr. Read. It appeared in one rearing-box June 26. Its habits are very fully described in the first report of Dr. Fitch on the Injurious Insects of New York.

A word more about the Seventeen-year Cicada. Professor R. Orton writes us from Yellow Springs, Ohio, that this insect has done great damage to the apple, peach, and quince trees, and are shortening the fruit crop very materially. By boring into twigs bearing fruit, the branches break and the fruit goes with them. "Many orchards have lost full two years' growth. Though the plum and cherry trees seemed exempt, they attacked the grape, blackberry, raspberry, elm (white and slippery), maple, white ash, willow, catalpa, honey-locust, and wild rose. We have traces of the Cicada this year from Columbus, Ohio, to St. Louis. Washington and Philadelphia have also had a visitation."—A. S. P.

PROCEEDINGS OF SCIENTIFIC SOCIETIES.

LONG ISLAND HISTORICAL SOCIETY, *Natural History Section. Brooklyn, N. Y.*—At a May meeting, a paper was read by Mr. E. Lewis, jr., on "Evidences of Coast-depression along the Shores of Long Island." It is found, by a series of observations made by Mr. Lewis and others, that large areas, known to have been formerly meadow swamp and woodland, are now permanently beneath the water. Some important changes have taken place along the flat shores within historic times. Remains of swamps with fresh-water vegetation are abundant, from four to nine feet below the surface of the meadows, along the southern side of the island, in the bay which intervenes between the beach and the uplands. In one instance roots of swamp vegetation, fast where they grew, were found quite near the beach, under ten feet depth of water. Stumps of the White, or Swamp-cedar (*Cupressus thyoides*), occur in great numbers, fast in the peaty meadows and salt marshes, which are now permanently covered with salt-water. Near Fort Hamilton are the Dyker Meadows, so-called, which extend inland nearly three-fourths of a mile. The upper end is a fresh-water swamp, with cedar and other trees. Where the tides overflow the trees are dead, many of them still standing. Lower down, or nearer the bay, stumps only remain; these abound in the meadows, and are in a good state of preservation. These meadows extend beneath the bay; and one-fourth of a mile from the shore-line, stumps of the cedar, from two feet to three feet in diameter, have been found. It is probably continuous with similar meadows on the opposite side of the river.

A general invasion of the beach along the coast has occurred within historic time; it having been thrown inland, submerging the meadows. From this cause large masses of old meadows are often torn up by waves outside the beach. There is evidence that the great bay, extending from near I slip to Bellport, was formerly a fresh-water swamp, from which streams of considerable size emptied into the ocean. It is now a shallow bay, in which, about a century since, were great numbers of stumps; the fresh-water and upland vegetation having been destroyed by the invasion of the tides. A line of fence-posts near Southampton, along the shore of the ocean, were exposed a few years since by an extremely low tide which followed a violent storm. These had been buried with sand and covered with water not less than a century, and the line was found to correspond with early surveys of the town. Submerged meadows are found in many places on the north shore of Long Island. A few miles east of Fort Jefferson, it extends half a mile from the shore, is solid, compact, and lies in places sixteen feet below the surface of the water at low tide. A general wearing away and undermining of the headlands around the island has long attracted attention. In constructing the Erie Basin, near Red Hook, New York Bay, Mr. G. B. Brainerd, engineer, found the following series of deposits. The measurements were taken at various points where the water was ten feet deep at low tide.

1. Two feet of mud,—ordinary sediment of the bay.
2. One foot of yellow sand.
3. Six inches of aluminous deposit, quite hard.
4. Ten feet of *compact decayed peaty meadow.*
5. Layer of extremely hard micacious clay and sand, beneath which was found mud, rather soft, but the depth and character of which was not determined.

During the summer of 1867, John Nadir, U. S. Engineer at Fort Hamilton, carefully examined the underlying formation around Fort Lafayette, for the purpose of determining whether it would admit of the erection upon it of heavier walls. By a series of borings, the earth was penetrated to the depth of fifty-three feet, at points between 800 and 1,000 feet from the shore, where there was ten feet depth of water at low tide. The deposits were as follows:

1. Twenty feet of coarse sand and gravel, with a few broken shells.
2. Three feet of *decayed marsh or meadow*, with diatomaceæ and spiculæ of sponges and shells.
3. Seventeen feet of gravel and sand, with many broken shells.
4. Thirteen feet of mud, quite compact, which appears to have been a marsh with scanty vegetation, rather than a meadow. The vegetable remains brought to the surface by the sand-pump are bits of cedar, and fragments of what appears to be salt-marsh grass, but too much decayed to be fully identified. In this formation great numbers of shells were found and identified by Mr. A. R. Young, Conchologist of the Section, as belonging to species now common on this coast. Most of the specimens are in an excellent state of preservation. Among them are *Nassa obsoleta*, *Anomia ephippium*, *Mya arenaria*, *Crepidula fornicata*, *Solen ensis*, and *Mytilus edulis.* It may be stated in this connection that similar de-

posits, at corresponding depths, have been found on the opposite side of the river in the vicinity of Fort Wadsworth.

The investigations made on the Long Island shores, confirm the conclusions arrived at by Professor G. H. Cook, in his report on the Geology of Cape May county, N. J., that the oscillation of land on this coast during the last epoch has been one of subsidence. If the formation found near Fort Lafayette be, as it evidently is, an ancient marsh, the depression has been at least fifty-three feet.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. *Seventeenth Annual Meeting, at Chicago, August,* 1868.—The objects of the American Association for the Advancement of Science are, by periodical and migratory meetings, to promote intercourse between those who are cultivating science in different parts of North America; to give a stronger and more general impulse, and a more systematic direction to scientific research in our country, and to procure for the labors of scientific men increased facilities and a wider usefulness.

The seventeenth meeting of the Association will be held at Chicago, during the week commencing on Wednesday, August 5, 1868, at 10 o'clock, A. M.

It will be the aim of the Local Committee to make the sojourn of the members of the Association in Chicago pleasant, as well as profitable in a scientific point of view. The usual local courtesies will be extended to them, both by private citizens and public bodies. Resolutions of invitation, and offers of the use of rooms, libraries, collections, etc., have already been passed by the Academy of Sciences, the Historical Society, the Young Men's Association, the University of Chicago, the Board of Trade, and other bodies.

With the view of insuring as large a meeting as possible, special attention has been given to the facilities for coming to and returning from the city over all routes of travel. Arrangements have been made with the railroad companies, by which return tickets will be furnished free to those who attend the meeting. Doubtless the same concession will be granted by the proprietors of some of the steamboat lines.

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BOOKS RECEIVED.

Observations on Crania. By Jeffries Wyman, M. D. Boston, 1868. 8vo, pp. 34.

Monograph of the Alcidæ. By Elliott Coues, M. D. Philadelphia, 1868, 8vo, pp. 31.

List of Birds collected in Southern Arizona. By Dr. E. Palmer; with remarks by Dr. Elliott Coues. Philadelphia, 1868. 8vo, pp. 4.

The Portland Catalogue of Maine Plants. Published by the Portland Society of Natural History. Portland, 1868. 8vo, pp. 12.

Popular Journal of Natural History. Third series, vol. 4, no. 4 (and extra number); vol. 5, no. 1, 2, 8vo. Copenhagen, 1868.

The Gospel in the Trees. By Alexander Clark. Philadelphia, 1868.

Cosmos. April 25, May 16, 23, 30, June 6. Paris.

The Field. May 23, 30, June 6, 13, 20. London.

The American Bee Journal. June. Washington, D. C.

Chemical News. June. New York.